

ABSTRACT

A nozzle 10 used in injection molding comprises at least one runner 30 within a nozzle casing 20 to convey injection material to be processed. At its lower end, the runner 30 communicates, in flow-transmitting manner, through a nozzle orifice element 40 and an insert 50, with an injection mold cavity constituted by at least one mold insert 12, 13. The insert preferably is made in powder metallurgy form of a wear-resistant material and is configured in limited longitudinally displaceable manner in the nozzle orifice 40 in the lower end of the runner 30. Said insert 50 furthermore constitutes a gate aperture 18. In the embodiment mode of a needle shutoff nozzle 10, a shutoff needle 60 displaceable between an open and a closed position passes through the runner 30 and through the insert 50 which constitutes a centering element wherein an intake cone 54 centers the intrinsic sealing element 65 of the needle 60. The thermally highly conducting nozzle orifice element 40 encloses the upper part 53 of the insert 50 and can be screwed from below into the nozzle casing 20. Alternatively the nozzle orifice element 40 and the insert 50 are integral and both are inserted as a unit into the nozzle casing 20 to be jointly longitudinally displaceable therein. The insert/centering element 50 is fitted with a support flange 52 so that the nozzle orifice element 40 and/or the insert 50 be reliably affixed.